

## REMARKS/ARGUMENTS

### General Remarks

At the outset, the applicant notes that the subject matter of the claims was commonly owned at the time the invention was made.

### 35 USC § 103

Claims 1-10 and 12-20 were previously rejected under 35 USC § 103 as being obvious over Ballard in view of Madsen. More specifically, the Examiner alleges that "...**Ballard substantially discloses applicant's invention** as recited by instant claims 1-10 and 12-20 except for the specific recitation that the divider...has a length of at least 50% of the distance between the top...and the bottom of the cap..." The *Examiner then combines Ballard with Madsen* (who allegedly teaches dividers having a length in excess of 50%) arguing that it would have been obvious to combine the references "...since such would provide a convenient means for affecting the flow through the space by segmenting the flow along a majority of the length of the space, **thereby reducing turbulence within the space...**"

### *Examiner's Arguments Are Technically And Legally Incorrect*

(1) There was no showing of any motivation or suggestion in the cited references by the Examiner as to why the references should be combined. The applicant respectfully requests that the Examiner provides such passages in the references, should the office insist that either Ballard and/or Madsen would teach such combination.

(2) The Examiner appears to argue that motivation or suggestion to combine would be provided by the knowledge of a person of ordinary skill in the art. Specifically, the Examiner states that such combination would provide a convenient means for reducing turbulence within the space. This assumption is not only technically flat out wrong, but should also not have been provided in light of the express claim language of independent claim 14. In fact, the extended dividers increase hydraulic resistance, while reduction in turbulence decreases turbulence.

(3) The Examiner incorrectly uses a reference for combination where that reference teaches against the claims. As pointed out before, the flow of air in Madsen's device is upwardly

with no flow of liquid, while all claims expressly require a co-current flow of vapor and liquid. If Madsen's device would have a co-current flow of liquid, the device would be inoperable for its intended purpose.

(4) Multiple limitations in independent claim 14 were simply ignored. Among other things, the Office failed to provide any statements with respect to "...a skirt height of no less than 1.5 inches...", "...divider length is selected such that hydraulic resistance of an upwardly moving mixture of a liquid fluid and a gaseous fluid in the space is increased...", and "...improve distribution of the liquid fluid and gaseous fluid to an area underneath the distribution plate..."

Claim 11 was further rejected under 35 USC § 103 as being obvious over Madsen in view of Ballard and further view of Jacobs. The Applicant disagrees. Again, Madsen cannot be properly applied as an obviousness type reference. Thus, a combination of Madsen with Ballard and Jacobs is also improper for the same reasons as provided above and the rejection should be withdrawn.

The applicant believes that the present claim amendments are sufficient to overcome the Examiner's concerns and believes that the claims as amended are now in condition for allowance. Therefore, the applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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